

THE HANDBOOK OF  
ROAD SAFETY MEASURES  
SECOND EDITION

## **RELATED BOOKS**

HIMANEN, LEE-GOSSELIN & PERRELS – *Building Blocks for Sustainable Transport: Obstacles, Trends, Solutions*

DAVID SHINAR – *Traffic Safety and Human Behaviour*

STOPHER & STECHER – *Travel Survey Methods Quality and Future Directions*

HENSHER & BUTTON (eds.) – *Handbooks in Transport*

FULLER & SANTOS – *Human Factors for Highway Engineers*

GAUDRY & LASSARE (eds.) – *Structural Road Accident Models*

DAGANZO – *Fundamentals of Transportation and Traffic Operations*

# THE HANDBOOK OF ROAD SAFETY MEASURES SECOND EDITION

BY

Rune Elvik

*Institute of Transport Economics, Oslo, Norway*

Alena Høye

*Institute of Transport Economics, Oslo, Norway*

Truls Vaa

*Institute of Transport Economics, Oslo, Norway*

Michael Sørensen

*Institute of Transport Economics, Oslo, Norway*



United Kingdom – North America – Japan  
India – Malaysia – China

Emerald Group Publishing Limited  
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2004

Second edition 2009

Copyright © 2009 Emerald Group Publishing Limited

**Reprints and permission service**

Contact: [booksandseries@emeraldinsight.com](mailto:booksandseries@emeraldinsight.com)

No part of this book may be reproduced, stored in a retrieval system, transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without either the prior written permission of the publisher or a licence permitting restricted copying issued in the UK by The Copyright Licensing Agency and in the USA by The Copyright Clearance Center. No responsibility is accepted for the accuracy of information contained in the text, illustrations or advertisements. The opinions expressed in these chapters are not necessarily those of the Editor or the publisher.

**British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-84855-251-7



Awarded in recognition of  
Emerald's production  
department's adherence to  
quality systems and processes  
when preparing scholarly  
journals for print



INVESTOR IN PEOPLE

## PREFACE

The second, revised edition of *The Handbook of Road Safety Measures*, first published by Elsevier Science in 2004, gives a systematic overview of current knowledge regarding the effects of road safety measures. The book gives state-of-the-art summaries of current knowledge regarding the effects of 128 road safety measures. Since 2004, the introduction part and 65 chapters have been revised and 5 chapters have been added.

Easily accessible knowledge on how to prevent traffic injury is in increasing demand, as the number of people killed or injured in road accidents continues to grow on a global basis. It is hoped that this book may serve as a reference manual for road safety professionals in every country. The 2004 edition of the book was published in Spanish in 2006.

The book is based on the Norwegian edition of the book, first published in 1982 and continuously updated and expanded since 2001. Work on this book started as far back as 1980. During the whole period from 1980 until now, the endeavour to develop and update the book has been funded by the Norwegian Ministry of Transport and Communications and the Norwegian Public Roads Administration. In recent years, the Swedish Road Administration has been an important contributor as well. The Institute of Transport Economics (TØI) would like to thank these institutions for their financial support and their long-term commitment to this research effort. Without the original Norwegian edition, the current English version could never have been produced.

The present edition is the result of the coordinated effort of Chief Research Officer Rune Elvik and researchers Alena Høye, Truls Vaa and Michael Sørensen – all belonging to the Institute of Transport Economics. The final preparation of the manuscript for publication was made by Unni Wettergreen. The points of view expressed in the book are those of the authors and do not necessarily reflect the positions of the funding agencies. Errors and omissions, if any, are the sole responsibility of the authors.

Oslo, May 2009  
Institute of Transport Economics

Lasse Fridstrøm  
Managing Director